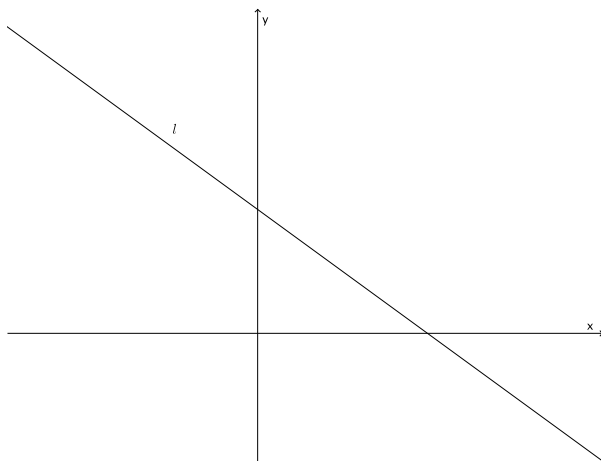
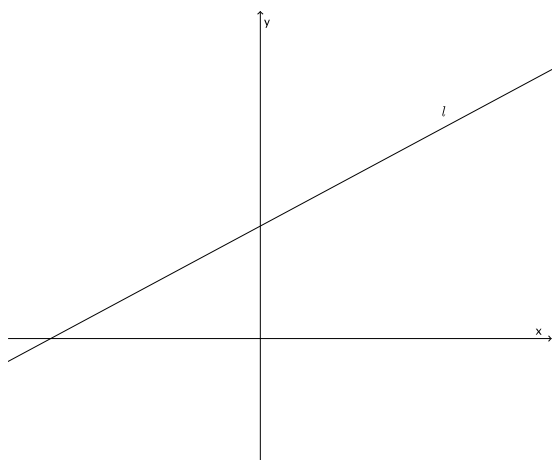


Problem Set

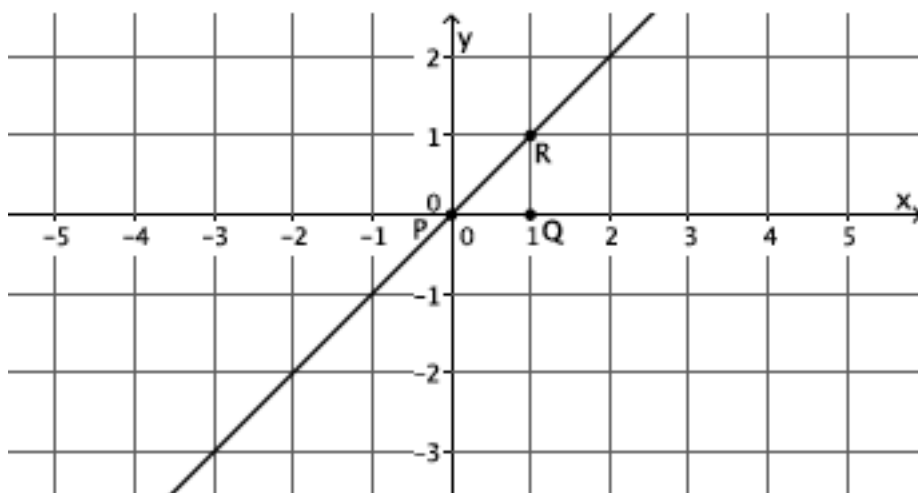
1. Does the graph of the line shown below have a positive or negative slope? Explain.



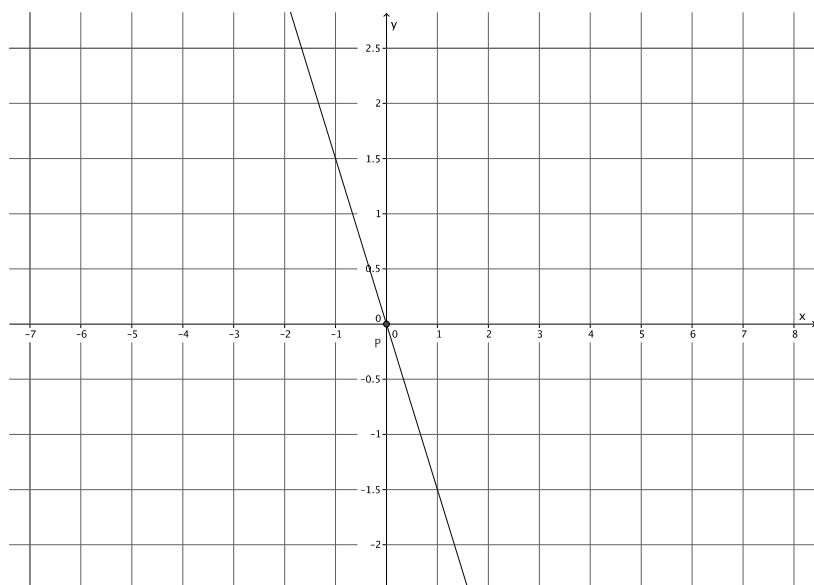
2. Does the graph of the line shown below have a positive or negative slope? Explain.



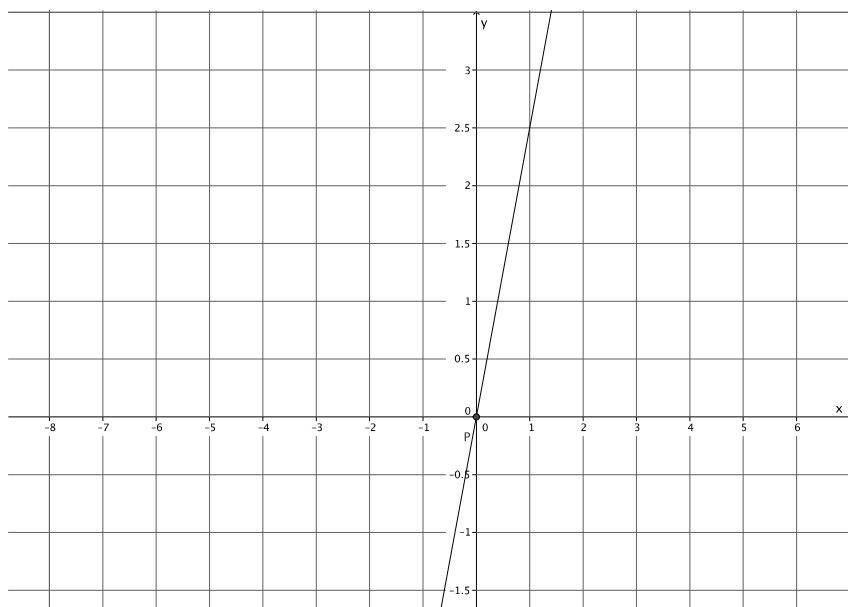
3. What is the slope of this non-vertical line? Use your transparency if needed.



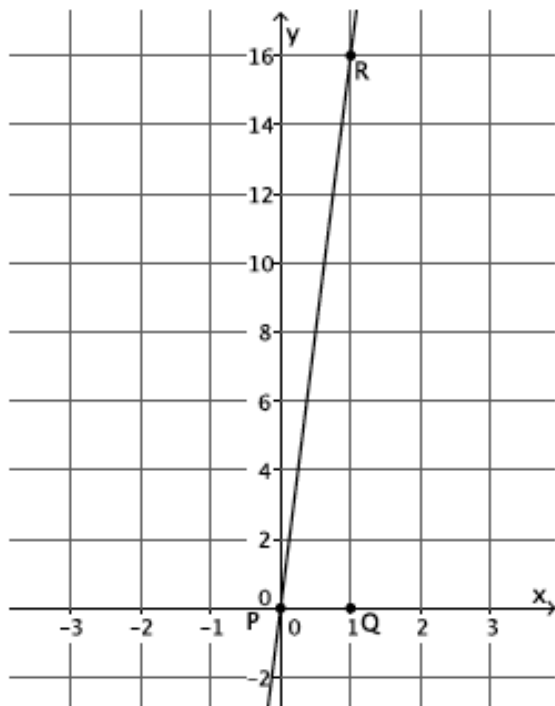
4. What is the slope of this non-vertical line? Use your transparency if needed.



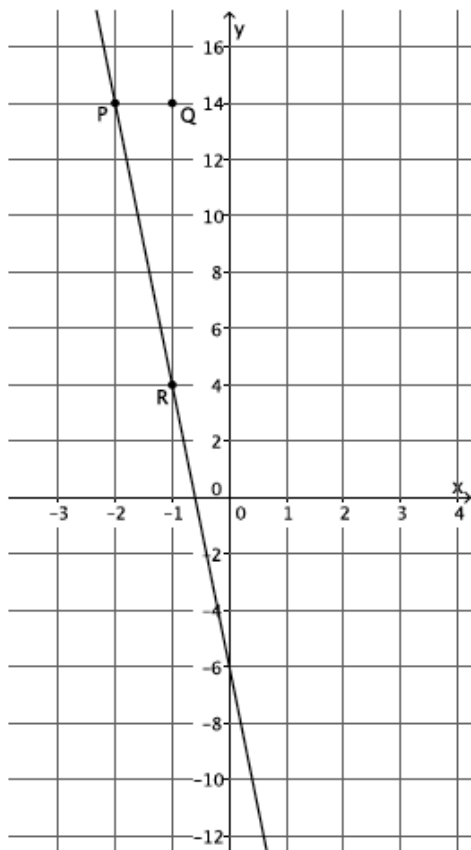
5. What is the slope of this non-vertical line? Use your transparency if needed.



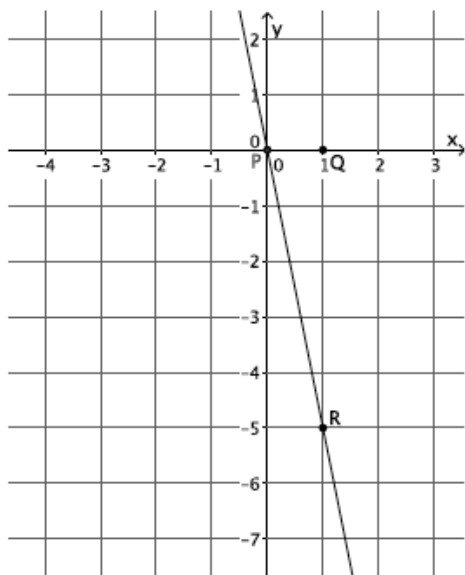
6. What is the slope of this non-vertical line? Use your transparency if needed.



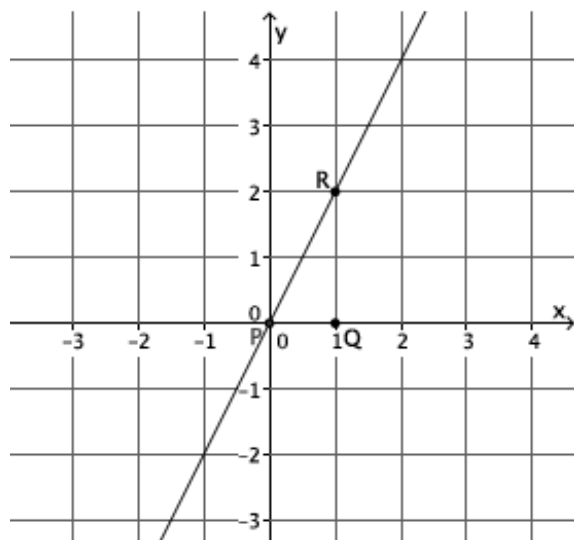
7. What is the slope of this non-vertical line? Use your transparency if needed.



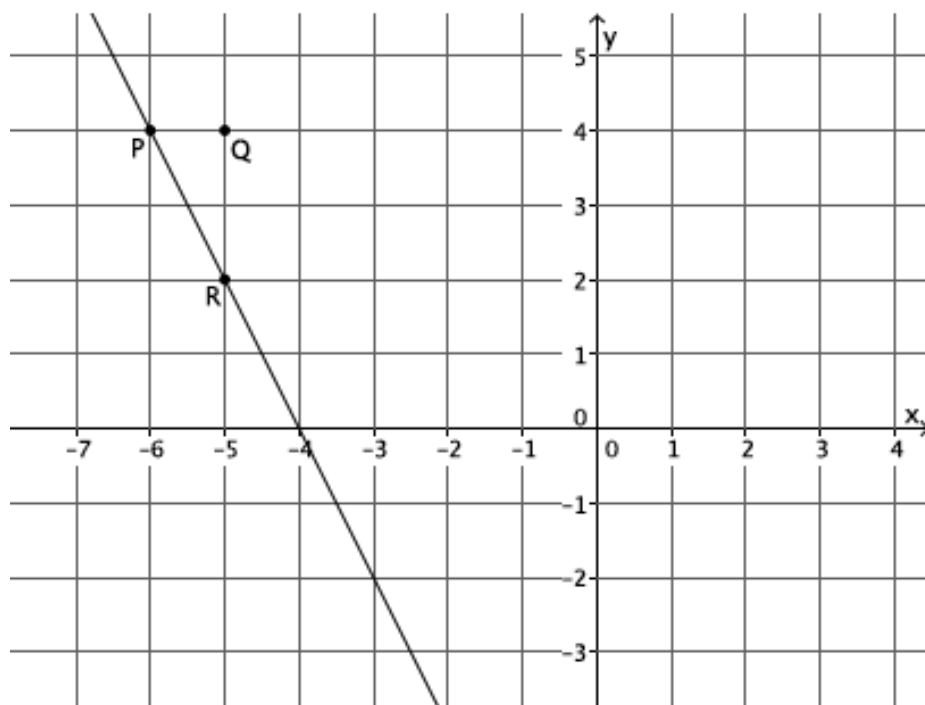
8. What is the slope of this non-vertical line? Use your transparency if needed.



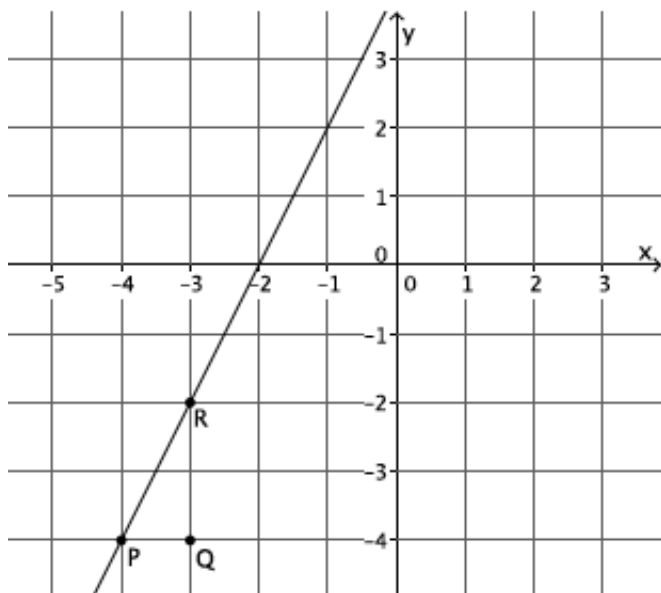
9. What is the slope of this non-vertical line? Use your transparency if needed.



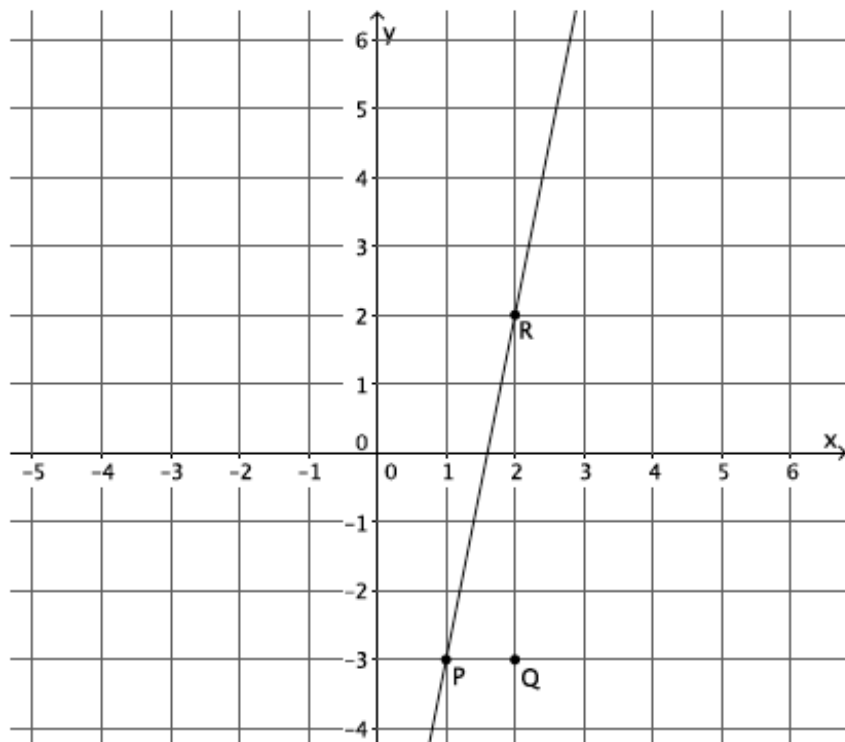
10. What is the slope of this non-vertical line? Use your transparency if needed.



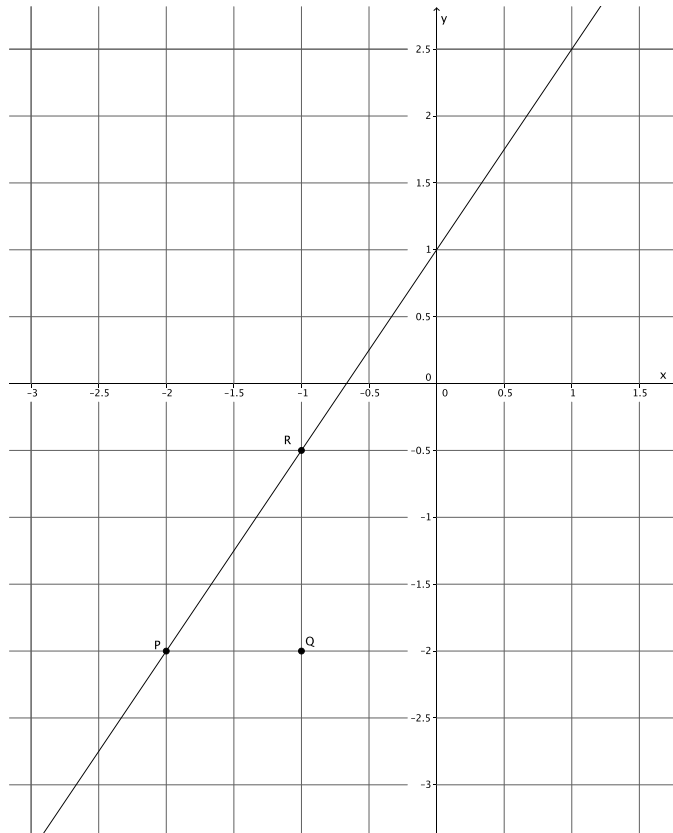
11. What is the slope of this non-vertical line? Use your transparency if needed.



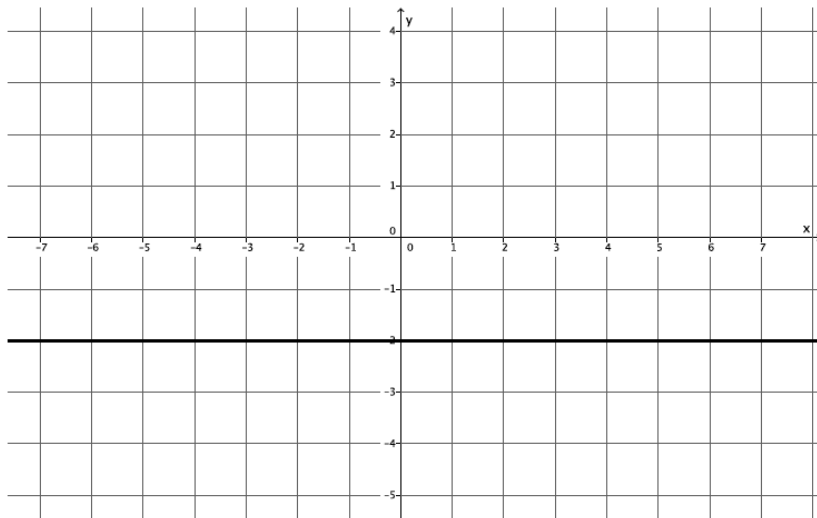
12. What is the slope of this non-vertical line? Use your transparency if needed.



13. What is the slope of this non-vertical line? Use your transparency if needed.



14. What is the slope of this non-vertical line? Use your transparency if needed.

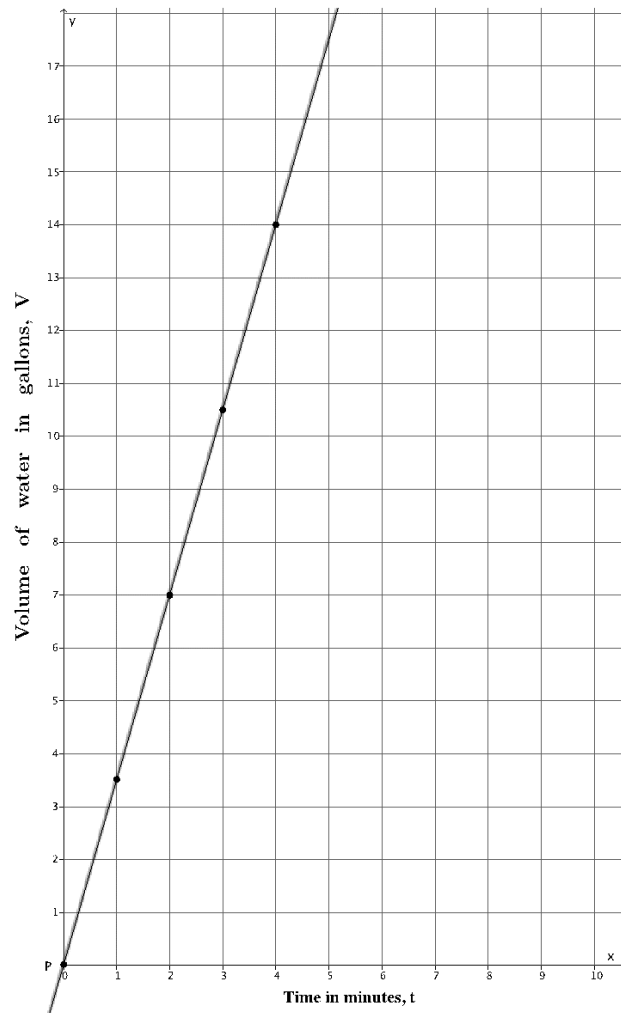


In Lesson 11, you did the work below involving constant rate problems. Use the table and the graphs provided to answer the questions that follow.

15. Suppose the volume of water that comes out in three minutes is 10.5 gallons.

t (time in minutes)	Linear Equation: $V = \frac{10.5}{3}t$	V (in gallons)
0	$V = \frac{10.5}{3}(0)$	0
1	$V = \frac{10.5}{3}(1)$	$\frac{10.5}{3} = 3.5$
2	$V = \frac{10.5}{3}(2)$	$\frac{21}{3} = 7$
3	$V = \frac{10.5}{3}(3)$	$\frac{31.5}{3} = 10.5$
4	$V = \frac{10.5}{3}(4)$	$\frac{42}{3} = 14$

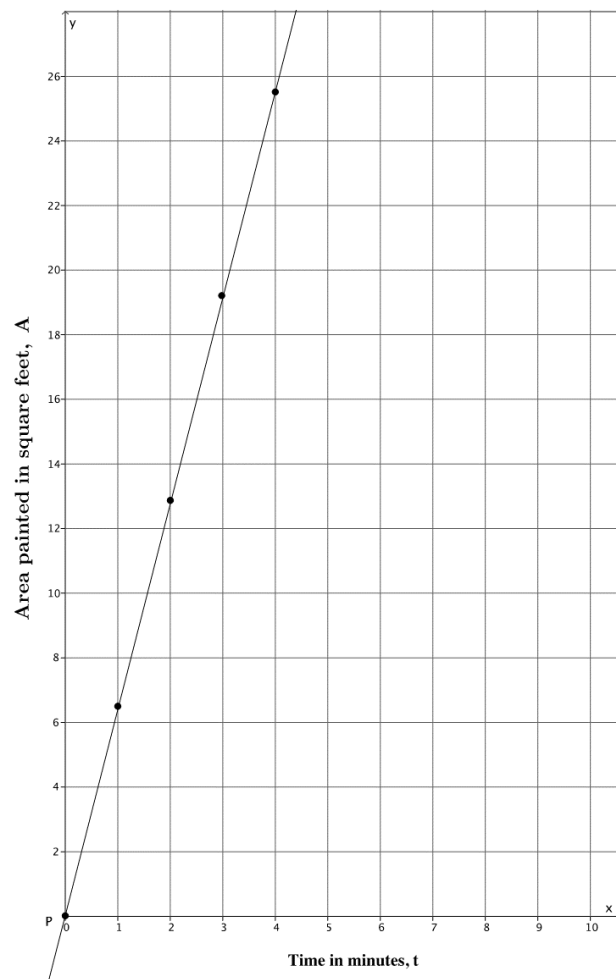
- How many gallons of water flow out of the faucet per minute? In other words, what is the unit rate of water flow?
- Assume that the graph of the situation is a line, as shown in the graph. What is the slope of the line?



16. Emily paints at a constant rate. She can paint 32 square feet in five minutes.

t (time in minutes)	Linear Equation: $A = \frac{32}{5}t$	A (area painted in square feet)
0	$A = \frac{32}{5}(0)$	0
1	$A = \frac{32}{5}(1)$	$\frac{32}{5} = 6.4$
2	$A = \frac{32}{5}(2)$	$\frac{64}{5} = 12.8$
3	$A = \frac{32}{5}(3)$	$\frac{96}{5} = 19.2$
4	$A = \frac{32}{5}(4)$	$\frac{128}{5} = 25.6$

- How many square feet can Emily paint in one minute? In other words, what is her unit rate of painting?
- Assume that the graph of the situation is a line, as shown in the graph. What is the slope of the line?



17. A copy machine makes copies at a constant rate. The machine can make 80 copies in $2\frac{1}{2}$ minutes.

t (time in minutes)	Linear Equation: $n = 32t$	n (number of copies)
0	$n = 32(0)$	0
0.25	$n = 32(0.25)$	8
0.5	$n = 32(0.5)$	16
0.75	$n = 32(0.75)$	24
1	$n = 32(1)$	32

- How many copies can the machine make each minute? In other words, what is the unit rate of the copy machine?
- Assume that the graph of the situation is a line, as shown in the graph. What is the slope of the line?

